IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

SIDEM and ENTROPIE S.A.S. Plaintiffs, vs. AQUATECH INTERNATIONAL CORPORATION, and CHARLES DESPORTES Defendants.	)	Civil Action No.

COMPLAINT

Plaintiffs Sidem and Entropie S.A. hereby file this Complaint against Aquatech International Corporation.

THE PARTIES

1. Plaintiff Sidem ("Sidem") is a corporation incorporated under the laws of France, with its principal office and place of business at 20-22 rue de Clichy, Paris 75009 France.

2. Plaintiff Entropie S.A.S. ("Entropie") is a wholly-owned subsidiary of Sidem, and is a corporation incorporated under the laws of France, with its principal office and place of business at 20-22 rue de Clichy, Paris 75009 France.

3. Defendant Aquatech International Corporation ("Aquatech") is a corporation incorporated under the laws of the Commonwealth of Pennsylvania, with its principal office and place of business at One Four Coins Drive, Canonsburg, Washington County, Pennsylvania 15317.

4. On information and belief, Defendant Charles Desportes is a resident of Hartland, Wisconsin and an employee of Aquatech.

JURISDICTION AND VENUE

5. This court has jurisdiction over the parties and the subject matter pursuant to 28 U.S.C. § 1332(a)(2).

6. Venue is proper pursuant to 28 U.S.C. § 1391(a). Aquatech is a resident of this District, subject to personal jurisdiction in this District, and a substantial part of the events giving rise to this action occurred in this District.

FACTS

A. Sidem's Development of MED Technology

7. Sidem is in the business of, among other things, designing and building large Multi-Effect Desalination ("MED") units for use in the water treatment industry.

8. MED units involve large evaporators used to desalinate seawater by boiling the seawater on the outside of a number of horizontal tubes, referred to as the tube bundle, to generate distilled water.

9. In the 1970s, Sidem was one of the first companies to construct and test horizontal falling film evaporators for use in small MED plants. Horizontal falling film evaporators consume less energy, are more cost-efficient, and result in less scaling (i.e. the formation of calcium carbonate and calcium sulfate deposits on dry surfaces when water evaporates) than other desalination units. A horizontal falling film MED unit is comprised of two basic parts: 1) the driving system – a thermocompressor, and 2) the generator system – a heat exchanger.

10. In the horizontal falling film heat exchanger, the seawater is sprayed through nozzles over a bundle of steam-heated horizontal tubes to evaporate a portion of the seawater. A constant, uniform flow of water on the tubes is necessary to maintain constant evaporation. If the distribution is not adequate, the tubes will not be properly wetted. Deposits of calcium carbonate and calcium sulfate scale will form on inadequately wetted tubes, which causes a temporary or even permanent reduction in the production of desalinated or distilled water. The evaporated vapor must flow to the outside of the bundle before it is condensed into distilled water. If the vapor exits the tube bundle at too high a velocity, the vapor will blow the water off the tubes, which will create dry patches on the tubes, resulting in scaling. The key to a successful horizontal falling film evaporator is to create a system that allows uniform distribution of water over the horizontal bundle of tubes, while simultaneously controlling the velocity of the vapor exiting the tube bundle such that it does not disturb the vertically flowing water, and using as little energy as possible.

11. The design for MED units with a capacity exceeding 10,000m^3/day of distilled water ("Large MED Units") is extremely complicated. The overall efficiency and reliability of Large MED Units depends on the performance of each interconnected part of the unit. As the size of the MED unit increases, it becomes more and more difficult to predict and control the equal distribution of water over the horizontal tubes, the velocity of the vapor flowing through and exiting the tube bundle, and the energy consumption of the entire MED unit.

12. Over a period of ten years, Sidem developed a commercially acceptable, energy efficient, cost effective, and highly confidential design for Large MED Units.

13. Part of this design includes a specialized spraying nozzle which is important in optimizing the ideal flow of seawater over the horizontal tube bundle in the heat exchanger. Sidem conducted extensive studies to design a heat exchanger that could produce a

large capacity of distilled seawater. Sidem conducted extensive studies to determine the minimum flow of water necessary to achieve uniform distribution of water from tube to tube regardless of the number of tubes in the bundle; complete wetting of the heat exchange surface of the tubes; and a system whereby any dry patch that emerges on a tube will be flushed away before scaling occurs.

14. Sidem also conducted extensive transverse vapor velocity studies of the bundled tubes to determine the optimum velocity of exiting vapor to avoid interaction between the exiting vapor and the vertically falling water, such that the exiting vapor does not blow the seawater droplets that drip from tube to tube off the tubes, causing dry patches on the tubes where scaling will occur. Sidem determined how to maintain a large amount of water flowing through the unit, uniform distribution of water over the horizontal tube bundle, and the optimum exiting vapor velocity, while still maintaining minimal energy consumption and providing a cost-effective design.

15. In the aggregate, the knowledge Sidem gained during the 10 year period in which Sidem developed a commercially acceptable, energy efficient, and cost effective design for Large MED Units is trade secret information (**"**Sidem Trade Secret Information").

16. Sidem is the only company in the world that has designed and delivered to its customers MED units capable of producing more than 30,000m^3/day of distilled water.

17. No company other than Sidem has ever delivered an MED unit that can deliver more than 18,0000m^3/day of distilled water.

18. Sidem takes careful measures to protect the Sidem Trade Secret Information including the use of confidentiality agreements, and confidentiality provisions set forth on its design drawings.

19. Sidem Trade Secret Information is not known to others in the industry.

20. Sidem Trade Secret Information has greatly contributed to Sidem and Entropie's commercial success.

B. Defendant Desportes' Access to Sidem's Trade Secret Information

21. From approximately January 1984 to August 2007, Defendant Charles Desportes was an Entropie employee, rising from the role of Project Engineer to become Entropie's Technical Director in 2003 – making Defendant Desportes Entropie's most senior technical employee from 2003 until his resignation in 2007.

22. In 2005, Veolia Water Solutions and Technologies ("VWS") acquired Entropie, and organized Entropie as a subsidiary of Sidem, which is also a VWS company.

23. After Entropie became a subsidiary of Sidem, Defendant Desportes had extensive access to the Sidem Trade Secret Information in his role as Entropie's Technical Director.

24. Entropie and Sidem shared best practices as it related to desalination processes generally, and MED technology in particular. As a consequence, Defendant Desportes became intimately familiar with the Sidem Trade Secret Information as a result of his employment by Entropie.

25. Defendant Desportes had and continues to have a legal obligation to maintain the confidentiality of all confidential information to which he had access by virtue of his employment, including the Sidem Trade Secret Information.

26. In particular, while employed by Entropie, Defendant Desportes was subject to a Convention Collective, which provides in relevant part: "Employees formally agree not to disclose to anyone anything contained in the plans, studies, concepts, projects, implementations, software studied in the company, either for the account of the company's customers or the company itself, declaring in this regard that they are bound by the strictest

professional secrecy. The above also applies to information, results, etc. resulting from work done at the company, or found at the customers." *See* Exhibit A (English translation of "Collective Agreement Extended, Engineering Firms, Specialist Engineering Consultant Firms, Consulting Firms IDCC: 1486," Article 77, Professional Secrecy).

C. Aquatech's Improper Use of Sidem Trade Secret Information

27. In September 2007, Aquatech hired Defendant Desportes as Director of Thermal Desalinization.

28. Before hiring Defendant Desportes, the largest MED unit Aquatech had ever designed or built had a capacity of 5,000m^3/day.

29. Less than six months after hiring Defendant Desportes, Aquatech submitted a bid on a project tendered by the Sharjah Electricity and Water Authority (the "SEWA Bid"). This project requested bidders to submit proposals for an MED unit with a capacity of approximately 45,000m^3/day.

30. Without access to the Sidem Trade Secret Information, Aquatech could not make the jump from its experience – which was limited to building MED units with a maximum capacity of 5,000m^3/day – to the requirements of the SEWA Bid which called for MED units with a capacity of 45,000m^3/day.

31. In a paper published at a November 2009 industry conference, Defendant Desportes described the process by which Aquatech prepared its design for the SEWA Bid (the "Aquatech Design Paper"). Exhibit B, hereto.

32. The Aquatech Design Paper states: "Aquatech, based on our experience in thermal desalination, developed an MED design and presented a convincing offer" to build and deliver "four units of 10MIGD (45,000m^3/d) each." Exhibit B, pp. 2. The only experience of

this type at Aquatech, however, was Desportes's experience at Entropie, which included his extensive exposure to the Sidem Trade Secret Information.

33. The Aquatech Design Paper states: "MED units can be, and have been, supplied in most capacities either with rectangular (0.1 up to currently 10 MIGD) (fig 3) or cylindrical vessels (0.1 up to currently 5 MIGD) (fig 2). The choice is driven by technical, economical and space considerations." Exhibit B, pp. 4. The phrase 10 MIGD refers to ten million gallons per day – which translates to 45,000m^3/day. The phrase 5 MIGD refers to five million gallons per day – which translates to 22,500m^3/day.

34. On information and belief, Aquatech has no experience designing and building rectangular vessels with capacities "up to currently 10MIGD" nor with designing and building cylindrical vessels with capacities "up to currently 5 MIGD." On information and belief, figure 2 in the Aquatech Design Paper shows the largest Aquatech vessel ever designed and built by Aquatech, which has a maximum capacity of 5,000m^3/day. *Id*. at 4. Figure 3 shows an Aquatech vessel with a stated capacity of 1,500m^3/day.

35. The experience with rectangular vessels up to 10MIGD and cylindrical vessels up to 5MIGD is not Aquatech's experience, but *Sidem's* experience. *See* Exhibit C, hereto.

36. The factors that drive "the choice" described by Defendant Desportes in the Aquatech Design Paper are known to Aquatech *only* through Defendant Desportes's knowledge of the Sidem Trade Secret Information.

37. Further the "design" depicted in figures 1 and 4 of the Aquatech Design Paper is based on Sidem's Trade Secret Information. *See generally* Exhibit C, pp. 10-11. Defendant Desportes was intimately familiar with this design based on his employment with Entropie and his access to the Sidem Trade Secret Information.

38. The Aquatech Design Paper states: "Once the tube bundle geometries were fixed, we worked on integrating these bundles (16 in all) into a single vessel (fig 4) and in finding the smallest size that would allow implementation of the heat exchangers, the demisters and leave sufficient space for the vapor to circulate simply between the effects at a reasonable velocity and be within the pressures losses allowed for in the process calculations." Exhibit B, pp. 4. The "integration work" Aquatech here describes, however, could only be performed by Aquatech based on Defendant Desportes's knowledge of the Sidem Trade Secret Information. Further, on information and belief, Figure 4 in the Aquatech Design Paper is a conceptual drawing that is based on Sidem drawings and design for Large MED units.

39. The Aquatech Design Paper states: "Maintenance considerations, such as sufficient space in front of each tube bundle for an eventual retubing without cutting the vessel open, were also taken into account, as well as Brine and Distillate flow paths and proper venting." *Id*. The "maintenance considerations," "flow paths," and "proper venting" here described are not known to Aquatech based upon independent experience or research and development. Rather, Defendant Desportes is describing in general terms part of the Sidem Trade Secret Information that he learned while working for Entropie.

40. The Aquatech Design Paper evidences not only Aquatech's past use of Sidem Trade Secret Information, but also its future intent to continue to use this information.

41. In addition to the Sidem Trade Secret Information known to Defendant Desportes as a result of the extensive technical work he performed for Entropie, Sidem believes, and therefore alleges, that Aquatech has acquired from Defendant Desportes and/or from other sources, Sidem Trade Secret Information that includes Sidem drawings.

42. This allegation is based on the drawings set forth in the Aquatech Design Paper which are obviously based on Sidem designs and drawings.

43. This allegation is further based on the following conclusion set forth in the Aquatech Design Paper:

> "The resulting design enables us to guarantee:
>
> • an output of 45 000 m3/d
>
> • using 219 t/h of steam including the steam needed for the vacuum system
>
> • with a power consumption of less than 0.55 kWh/m3 of distillate (not counting the sea water pumps)
>
> • a distillate quality < 5ppm TDS
>
> • a fully workshop manufactured unit minimizing site work."

Exhibit B, pp. 5. This "guarantee" (which is the type of performance guarantee Aquatech would have had to provide as part of its SEWA Bid), is not a "guarantee" Aquatech could afford to make unless it was working with a design that was either: (a) the result of years of experience and research and development (which Aquatech does not have), or (b) the result of working with a commercially tested and accepted design (i.e., Sidem's design), which Defendant Desportes had confirmed would support the "guarantees" described in the Aquatech Design Paper.

44. As supported by the allegations in paragraphs 1-42, above, Sidem and Entropie believe, and therefore allege, that Aquatech has used and plans to continue to use the Sidem Trade Secret Information, including Sidem drawings and possibly Entropie drawings, to submit bids on Large MED Units and to unfairly compete with Sidem and Entropie.

COUNT I

Misappropriation of Trade Secrets

(Pennsylvania Uniform Trade Secrets Act 12 Pa. C.S. §§ 5301 – 5308)

(Against All Defendants)

45. Sidem and Entropie hereby incorporate the preceding paragraphs as if fully set forth herein.

46. Sidem developed the Sidem Trade Secret Information over a period of ten years of research and development and further refined this information after acquiring Entropie and sharing technical information regarding best practices in MED technology.

47. Sidem and Entropie took significant measures to guard the secrecy of Sidem Trade Secret Information, including requiring all of their employees to comply with their legal obligation to maintain the confidentiality of all technical information learned as part of their employment responsibilities.

48. Defendant Desportes's knowledge of the Sidem Trade Secret Information is so extensive that he cannot — without disclosing Sidem Trade Secret Information — work for any company that is actively designing and/or building Large MED units.

49. Moreover, now that Defendant Desportes has disclosed to Aquatech the Sidem Trade Secret Information, Aquatech cannot design or build Large MED units without relying on the Sidem Trade Secret Information improperly disclosed by Defendant Desportes.

50. The Defendants previously used and disclosed, and continue to use and disclose, the Sidem Trade Secret Information in the development and submission of bids on Large MED Units.

51. As a result of the Defendants' conduct, Sidem and Entropie have suffered and/or will suffer substantial harm and economic damages.

52. Defendants' conduct is willful, malicious, and in bad faith. Accordingly, Sidem and Entropie are entitled to recover exemplary damages and attorney's fees.

53. Sidem and Entropie are entitled to a preliminary and permanent injunction prohibiting Aquatech from using Sidem Trade Secret Information, and prohibiting Aquatech for a period of no less than five years from constructing and building any MED units with a capacity larger than 10,000m^3/day.

54. Entropie and Sidem are also entitled to recover their lost profits and the disgorgement of monies made by Aquatech as a result of the misappropriation of the Sidem Trade Secret Information.

COUNT II

Misappropriation of Confidential Business Information

(Against All Defendants)

55. Sidem and Entropie hereby incorporate the preceding paragraphs as if fully set forth herein.

56. Defendant Desportes had a duty to Sidem and Entropie not to disclose and to keep confidential all Sidem and Entropie confidential business information that he learned while employed at Entropie.

57. Sidem's and Entropie's confidential business information includes the information relating to the design and construction of Large MED Units.

58. By hiring Defendant Desportes and then using his knowledge of Sidem and Entropie confidential business information to unfairly compete with Sidem and Entropie, Aquatech induced Defendant Desportes to disclose Sidem's and Entropie's confidential business information to Aquatech.

59. The Defendants previously used and disclosed, and continue to use and disclose, the Sidem and Entropie confidential business information in the development and submission of bids on Large MED Units.

60. As a result of the Defendants' conduct, Sidem and Entropie have suffered substantial harm and economic damages.

WHEREFORE, Sidem and Entropie respectfully request that this Court enter Judgment in their favor and against Aquatech International Corporation and Charles Desportes and award the following relief:

a. Issue a preliminary and permanent injunction prohibiting Aquatech International Corporation from using misappropriated Sidem Trade Secret Information in the bidding and/or manufacturing of MED projects;

b. Issue a permanent injunction prohibiting Aquatech International Corporation for a period of five years from bidding for, constructing, or participating in any way in the design or building of any MED unit with a capacity greater than 10,000m^3/day of distilled water;

c. Monetary damages for lost profits due to Aquatech International Corporation's entry into the market as a result of the misappropriation of the Sidem Trade Secret Information;

d. Disgorgement of any profits Aquatech International Corporation has acquired based on its misappropriation of the Sidem Trade Secret Information;

e. Exemplary damages in an amount at least two times the amount of Entropie and Sidem's damages for the trade secret misappropriation by Charles Desportes and Aquatech International Corporation;

f. Reasonable attorneys fees expenses, and costs;

g. Prejudgment interest; and

h. Such further relief as the Court may deem just and appropriate.

Dated: January 19, 2010

Respectfully submitted,

PEPPER HAMILTON LLP

By: */s/ Andrew K. Fletcher*

Andrew K. Fletcher (Pa. I.D. No. 75544)
Jessica Beckett-McWalter (Pa. I.D. No. 207140)
Amber Schuknecht Martin (Pa. ID No. 202927)
500 Grant Street, 50th Floor
Pittsburgh, Pennsylvania 15219

Counsel for Plaintiffs, Sidem and Entropie S.A.